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L6: Entry 7 of 10

File: DWPI

Nov 20, 2000

DERWENT-ACC-NO: 1993-190187

DERWENT-WEEK: 200101

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TITLE: Melt blown nonwoven fabric and laminates - comprises ethylene α -olefin copolymer with specified density and crystallinity

INVENTOR: MASUMOTO, K; SAEKI, A ; SHIMIZU, M ; SHIRAYANAGI, R

PRIORITY-DATA: 1991JP-0343698 (December 25, 1991), 1991JP-0326264 (December 11, 1991)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---------------|-------------------|----------|-------|------------|
| JP 3110533 B2 | November 20, 2000 | | 008 | D04H001/54 |
| EP 546837 A1 | June 16, 1993 | E | 025 | D04H001/56 |
| JP 05163648 A | June 29, 1993 | | 025 | D04H001/42 |
| JP 05171556 A | July 9, 1993 | | 025 | D04H001/54 |
| CA 2085073 A | June 12, 1993 | | 000 | D04H003/04 |
| US 5306545 A | April 26, 1994 | | 019 | B32B027/14 |
| KR 9411591 B1 | December 22, 1994 | | 000 | D04H001/56 |
| EP 546837 B1 | November 4, 1998 | E | 000 | D04H001/56 |
| DE 69227498 E | December 10, 1998 | | 000 | D04H001/56 |
| JP 3066152 B2 | July 17, 2000 | | 010 | D04H001/42 |

INT-CL (IPC): A61F 13/00; B32B 5/26; B32B 27/02; B32B 27/14; B32B 27/32; D01F 6/46; D01F 8/06; D04H 1/42; D04H 1/54; D04H 1/56; D04H 1/72; D04H 3/03; D04H 3/04; D04H 3/16; D04H 5/06

ABSTRACTED-PUB-NO: EP 546837A

BASIC-ABSTRACT:

A melt-blown nonwoven fabric comprising an ethylene/alpha-olefin copolymer, density below 0.900 g/cm³, crystallinity 5-40%, or a resin compsn. comprising the copolymer.

Also claimed are (1) A cataplasm comprising, as a laminated unitary structure, the above fabric and a dry-type nonwoven fabric, having a medicine layer on the latter. (2) A nonwoven fabric material comprising, as a laminated unitary structure, the above fabric and a dry-type nonwoven fabric. (3) A nonwoven fabric material comprising a melt-blown nonwoven fabric comprising a resin compsn. comprising 98-40 wt.% polypropylene and 2-60 wt.% ethylene/alpha-olefin copolymer as above, and a reinforcing layer heat-adhered at discrete, spaced apart regions to the melt-blown nonwoven fabric surface(s). (4) A mask, medical device, cleaning or clothing material composed of (2) or (3).

(5) Prodn. of a fabric, device or material as above, comprising melt-blowing an ethylene/alpha-olefin copolymer or resin compsn. thereof. (6) Prodn. of (3) by laminating a reinforcing layer on the melt-blown nonwoven fabric and heat-adhering together at intermittent discrete regions on the nonwoven fabric surface.

USE/ADVANTAGE - The fabric has excellent softness, elasticity and fitting to curved and stretched or contracted surfaces. The resin compsn. fabric has partic. excellent heat-workability at low temps. The fabric exhibits mechanical properties and heat resistance comparable to polypropylene. Uses include masks, medical devices, cleaning

and clothing material (claimed).

ABSTRACTED-PUB-NO:

EP 546837B EQUIVALENT-ABSTRACTS:

A melt-blown nonwoven fabric comprising an ethylene/alpha-olefin copolymer, density below 0.900 g/cm³, crystallinity 5-40%, or a resin compsn. comprising the copolymer.

Also claimed are (1) A cataplasm comprising, as a laminated unitary structure, the above fabric and a dry-type nonwoven fabric, having a medicine layer on the latter. (2) A nonwoven fabric material comprising, as a laminated unitary structure, the above fabric and a dry-type nonwoven fabric. (3) A nonwoven fabric material comprising a melt-blown nonwoven fabric comprising a resin compsn. comprising 98-40 wt.% polypropylene and 2-60 wt.% ethylene/alpha-olefin copolymer as above, and

a reinforcing layer heat-adhered at discrete, spaced apart regions to the melt-blown nonwoven fabric surface(s). (4) A mask, medical device, cleaning or clothing material composed of (2) or (3).

(5) Prodn. of a fabric, device or material as above, comprising melt-blowing an ethylene/alpha-olefin copolymer or resin compsn. thereof. (6) Prodn. of (3) by laminating a reinforcing layer on the melt-blown nonwoven fabric and heat-adhering together at intermittent discrete regions on the nonwoven fabric surface.

USE/ADVANTAGE - The fabric has excellent softness, elasticity and fitting to curved and stretched or contracted surfaces. The resin compsn. fabric has partic. excellent heat-workability at low temps. The fabric exhibits mechanical properties and heat resistance comparable to polypropylene. Uses include masks, medical devices, cleaning and clothing material (claimed).

US 5306545A

The melt-blown non-woven fabric of fine fibres obtd. by melt-blowing an ethylene-alpha-olefin copolymer (I) having a density of under 0.900 g/cm³ and a crystallinity of 5-40% or by melt-blowing a resin compsn. which comprises the copolymer.

(I) contains a 3-10C alpha-olefin, and has an ethylene content of 85-95 mol.%, a melt flow rate of 0.1-200 g/10 min. (190 deg.C under a load of 2160 g), a density of over 0.870-0.900 g/cm³, and a crystallinity of 5-40%, and pref. has a m.pt. (T_m) of 40-100 deg.C.

USE/ADVANTAGE - Clothing and medical supplies. Easily heat worked and heat embossed.



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L6: Entry 6 of 10

File: DWPI

Dec 25, 2001

DERWENT-ACC-NO: 1993-206856
 DERWENT-WEEK: 200203
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TITLE: Composite elastic material including anisotropic elastic fibrous web - having elastomeric melt-blown fibre and parallel elastomeric filament layers

INVENTOR: WRIGHT, R D

PRIORITY-DATA: 1991US-0805736 (December 9, 1991)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---------------|-------------------|----------|-------|------------|
| JP 3242172 B2 | December 25, 2001 | | 015 | D04H001/56 |
| EP 548609 A1 | June 30, 1993 | E | 022 | B32B005/04 |
| AU 9227234 A | June 10, 1993 | | 000 | D04H001/70 |
| CA 2071084 A | June 10, 1993 | | 000 | A61F013/54 |
| ZA 9208058 A | July 28, 1993 | | 042 | A61F000/00 |
| JP 05272043 A | October 19, 1993 | | 015 | D04H001/56 |
| AU 655081 B | December 1, 1994 | | 000 | D04H001/70 |
| US 5385775 A | January 31, 1995 | | 017 | B32B027/00 |
| EP 548609 B1 | February 21, 2001 | E | 000 | B32B005/04 |
| DE 69231695 E | March 29, 2001 | | 000 | B32B005/04 |
| KR 255571 B1 | May 1, 2000 | | 000 | D04H001/56 |

INT-CL (IPC): A41B 17/00; A61F 0/00; A61F 13/15; A61F 13/54; A61L 15/30; B32B 5/04; B32B 5/16; B32B 5/26; B32B 27/00; B32B 27/36; D02G 3/32; D04H 1/04; D04H 1/50; D04H 1/56; D04H 1/70; D04H 3/02; D04H 3/04; D04H 13/00; D06C 0/00

ABSTRACTED-PUB-NO: EP 548609A
 BASIC-ABSTRACT:

Composite elastic material having improved tenacity in one direction comprises an anisotropic elastic fibrous web (130) having a first layer of elastomeric melt-blown fibres (126) and a second layer of parallel elastomeric filaments (118) bonded to the first layer and at least one gatherable layer joined at spaced locations to the fibrous web and gathered between those locations.

USE/ADVANTAGE - Material is used in garments, pads, napkins, and personal care prods., esp. disposable items. Because it is only elastic in one direction, the amt. of elastic material can be reduced, greatly reducing its cost.
 ABSTRACTED-PUB-NO:

EP 548609B EQUIVALENT-ABSTRACTS:

Composite elastic material having improved tenacity in one direction comprises an anisotropic elastic fibrous web (130) having a first layer of elastomeric melt-blown fibres (126) and a second layer of parallel elastomeric filaments (118) bonded to the first layer and at least one gatherable layer joined at spaced locations to the fibrous web and gathered between those locations.

USE/ADVANTAGE - Material is used in garments, pads, napkins, and personal care prods., esp. disposable items. Because it is only elastic in one direction, the amt. of

elastic material can be reduced, greatly reducing its cost.

US 5385775A

Composite elastic material with improved tenacity in one direction comprises an anisotropic elastic fibrous web including a first layer of elastomeric melt blow fibres and a second layer of parallel elastomeric filaments autogenously bonded to the melt blow fibres to give an isotropic web and a gatherable layer joined at spaced apart locations on the anisotropic elastic fibrous web and gathered between.

USE/ADVANTAGE - For providing a composite elastic material. Provides improved tenacity in one direction.

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L6: Entry 5 of 10

File: DWPI

May 2, 2001

DERWENT-ACC-NO: 1994-176243
 DERWENT-WEEK: 200220
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TITLE: Stretchable metallised nonwoven web of non-elastomeric thermoplastic fibres - comprises melt-blown, spun-bonded, or carded fibre web which has been heated and necked to render it stretchable before being coated with metal

INVENTOR: COHEN, B

PRIORITY-DATA: 1993US-0028672 (March 9, 1993)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---------------|--------------------|----------|-------|-------------|
| KR 285400 B | May 2, 2001 | | 000 | D04H001/24 |
| US 5316837 A | May 31, 1994 | | 014 | B32B015/00 |
| EP 615015 A1 | September 14, 1994 | E | 019 | D04H001/42 |
| AU 9457673 A | September 15, 1994 | | 000 | B32B005/26 |
| CA 2101834 A | September 10, 1994 | | 000 | B32B005/04 |
| JP 06299457 A | October 25, 1994 | | 013 | D04H013/00 |
| ZA 9400577 A | November 30, 1994 | | 037 | B32B000/00 |
| TW 252999 A | August 1, 1995 | | 000 | D04H013/00 |
| AU 670664 B | July 25, 1996 | | 000 | B32B005/26 |
| MX 184497 B | April 21, 1997 | | 000 | B32B015/000 |
| EP 615015 B1 | November 11, 1998 | E | 000 | D04H001/42 |
| DE 69414436 E | December 17, 1998 | | 000 | D04H001/42 |

INT-CL (IPC): B32 B 0/00; B32 B 5/04; B32 B 5/26; B32 B 5/32; B32 B 15/00; B32 B 15/000; B32 B 15/08; D04 H 1/24; D04 H 1/42; D04 H 13/00; D06 M 11/83

ABSTRACTED-PUB-NO: EP 615015B

BASIC-ABSTRACT:

Stretchable, metallised, nonwoven web is web of non-elastomeric thermoplastic polymer fibres which has been heated and then necked so that it is able to stretch in a direction parallel to neck-down at least 10% more than an identical untreated nonwoven web and has a metallic coating covering at least a portion of one side.

Pref. the thermoplastic fibres of the nonwoven web are non-elastomeric melt-blown fibres, spun-bonded fibres or filaments, or carded fibres. The melt-blown fibres include melt-blown microfibres, at least 50% of which have an average dia. of less than 5 microns. The fibres are esp. polyolefin, polyester, or polyamide, the polyolefin being one or more of polyethylene, polypropylene, polybutene, ethylene copolymer, propylene copolymer, a butene copolymer. The web may also contain wood pulp, textile fibres, and particulates, the textile fibres being polyester, polyamide, glass, polyolefin, cellulosic, multicomponent, natural, absorbent, electrically conductive, or blends of two or more such non-elastic fibres and the particulates being activated charcoal, clays, starches, metal oxides, or super-absorbent materials.

USE/ADVANTAGE - The web is suitable for use in clean-rooms, surgical procedures, and laboratories, etc. because of its relatively low level of loose particles. The web may be mfd. so inexpensively that it may be economically disposed of after a limited

period of use.
ABSTRACTED-PUB-NO:

US 5316837A EQUIVALENT-ABSTRACTS:

Stretchable, metallised, nonwoven web is web of non-elastomeric thermoplastic polymer fibres which has been heated and then necked so that it is able to stretch in a direction parallel to neck-down at least 10% more than an identical untreated nonwoven web and has a metallic coating covering at least a portion of one side.

Pref. the thermoplastic fibres of the nonwoven web are non-elastomeric melt-blown fibres, spun-bonded fibres or filaments, or carded fibres. The melt-blown fibres include melt-blown microfibres, at least 50% of which have an average dia. of less than 5 microns. The fibres are esp. polyolefin, polyester, or polyamide, the polyolefin being one or more of polyethylene, polypropylene, polybutene, ethylene copolymer, propylene copolymer, a butene copolymer. The web may also contain wood pulp, textile fibres, and particulates, the textile fibres being polyester, polyamide, glass, polyolefin, cellulosic, multicomponent, natural, absorbent, electrically conductive, or blends of two or more such non-elastic fibres and the particulates being activated charcoal, clays, starches, metal oxides, or super-absorbent materials.

USE/ADVANTAGE - The web is suitable for use in clean-rooms, surgical procedures, and laboratories, etc. because of its relatively low level of loose particles. The web may be mfd. so inexpensively that it may be economically disposed of after a limited period of use.



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L6: Entry 4 of 10

File: DWPI

Apr 10, 2002

DERWENT-ACC-NO: 1996-342140

DERWENT-WEEK: 200227

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TITLE: Nonwoven fabric laminate having cross=directional stretch - comprises outer crimpable spun:bond polymer web layers and an inner elastomeric polymer layer, unstretched during prodn. and bonding

INVENTOR: COLLIER, L W; ESTEY, P W ; SHAWVER, S E ; ESTEY, P ; ESTEY, W

PRIORITY-DATA: 1995US-0371333 (January 11, 1995)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---------------|------------------|----------|-------|-------------|
| EP 802857 B1 | April 10, 2002 | E | 000 | B32B005/04 |
| WO 9621562 A1 | July 18, 1996 | E | 024 | B32B005/04 |
| US 5540976 A | July 30, 1996 | | 007 | B32B027/14 |
| AU 9646557 A | July 31, 1996 | | 000 | B32B005/04 |
| ZA 9600167 A | October 30, 1996 | | 022 | D06M000/00 |
| EP 802857 A1 | October 29, 1997 | E | 000 | B32B005/04 |
| BR 9606751 A | January 6, 1998 | | 000 | B32B005/04 |
| TW 324034 A | January 1, 1998 | | 000 | D04H001/02 |
| MX 9705020 A1 | October 1, 1997 | | 000 | B32B005/04 |
| KR 98701328 A | May 15, 1998 | | 000 | B32B005/04 |
| AU 705709 B | May 27, 1999 | | 000 | B32B005/04 |
| MX 196774 B | June 1, 2000 | | 000 | B32B005/004 |

INT-CL (IPC): A41 B 0/00; A61 F 0/00; B32 B 5/004; B32 B 5/024; B32 B 5/04; B32 B 5/24; B32 B 27/14; D04 H 1/02; D04 H 13/00; D04 H 13/000; D06 M 0/00

ABSTRACTED-PUB-NO: EP 802857B

BASIC-ABSTRACT:

A laminate having cross-directional stretch comprises: a first layer of a crimpable spun-bond polymer web; a second layer of an elastomeric polymer; and a third layer of a crimpable spun-bond polymer web. The layers are bonded together by a method excluding hydro-entanglement to form a laminate, and are maintained in an unstretched condition throughout their prodn. and bonding into the laminate.

USE - The laminate is useful in medical prods. (claimed), esp. a surgical gown (claimed), face mask (claimed) or wiper (claimed); personal care prods. (claimed), esp. a diaper (claimed) or feminine hygiene prod. (claimed); and outdoor fabrics (claimed).

ABSTRACTED-PUB-NO:

US 5540976A EQUIVALENT-ABSTRACTS:

A laminate having cross-directional stretch comprises: a first layer of a crimpable spun-bond polymer web; a second layer of an elastomeric polymer; and a third layer of a crimpable spun-bond polymer web. The layers are bonded together by a method excluding hydro-entanglement to form a laminate, and are maintained in an unstretched condition throughout their prodn. and bonding into the laminate.

USE - The laminate is useful in medical prods. (claimed), esp. a surgical gown (claimed), face mask (claimed) or wiper (claimed); personal care prods. (claimed), esp. a diaper (claimed) or feminine hygiene prod. (claimed); and outdoor fabrics (claimed).

A laminate having cross-directional stretch comprising: a first layer of a crimpable spunbond polymer web made from fibres selected from the group consisting of biconstituent and bicomponent fibres; a second layer of an elastomeric polymer; a third layer of a crimpable spunbond polymer web made from fibres selected from the group consisting of biconstituent and bicomponent fibres; where the layers are bonded together by a method excluding hydroentanglement to form a laminate with an open bond pattern having between about 5 and 15 percent bond area, the layers are maintained in an unstretched condition throughout their production and bonding into the laminate, and where the laminate stretches in the cross direction. [ECNEND]

WO 9621562A

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L6: Entry 3 of 10

File: DWPI

Nov 6, 2000

DERWENT-ACC-NO: 1997-341406
 DERWENT-WEEK: 200128
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TITLE: Absorbent article incorporating extensible zones for containing body exudates -
 formed by stretching spun-bonded layer of material in either one direction or other,
 enabling article to resiliently adapt to fit wide range of user sizes

INVENTOR: SERBIAK, P J; UITENBROEK, D G ; ZEHNER, G L ; ULTENBROEK, D G

PRIORITY-DATA: 1995US-0575310 (December 20, 1995)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|-----------------|-------------------|----------|-------|------------|
| KR 2000064484 A | November 6, 2000 | | 000 | A61F013/15 |
| WO 9722318 A1 | June 26, 1997 | E | 048 | A61F013/15 |
| ZA 9609956 A | August 27, 1997 | | 043 | A61F000/00 |
| AU 9710793 A | July 14, 1997 | | 000 | A61F013/15 |
| EP 869757 A1 | October 14, 1998 | E | 000 | A61F013/15 |
| US 5846232 A | December 8, 1998 | | 000 | A61F013/15 |
| CZ 9801935 A3 | January 13, 1999 | | 000 | A61F013/15 |
| SK 9800858 A3 | January 11, 1999 | | 000 | A61F013/15 |
| BR 9612044 A | February 9, 1999 | | 000 | A61F013/15 |
| CN 1211173 A | March 17, 1999 | | 000 | A61F013/15 |
| HU 9902047 A2 | October 28, 1999 | | 000 | A61F013/15 |
| NZ 323770 A | January 28, 2000 | | 000 | A61F013/15 |
| AU 715677 B | February 10, 2000 | | 000 | A61F013/15 |
| JP 2000502268 W | February 29, 2000 | | 044 | A61F013/15 |
| MX 9804921 A1 | February 1, 1999 | | 000 | A61F013/15 |

INT-CL (IPC): A61 F 0/00; A61 F 5/44; A61 F 13/15

ABSTRACTED-PUB-NO: US 5846232A
 BASIC-ABSTRACT:

An absorbent article (8) comprises: (a) a front portion (10), a rear portion (12) and a crotch portion (14) connecting the front and rear portions; consisting of (b) an outer cover layer, and a body side liner layer forming a base structure (26), and incorporating an elastic layer (28) mounted between it to form extensible zones (30); and (c) an absorbent core (36) is also mounted between the outer cover layer and body side liner layer; and (d) Attachment elements (32) such as hook and loop fasteners or adhesive fasteners are attached to the outer cover layer on the rear portion (12) of it, with a corresponding attachment surface provided on the front portion (10) of the outer cover layer. Also claimed is a method for forming an absorbent article.

USE - For containing body exudates.

ADVANTAGE - Incorporates extensible zones adapted to allow the article to fit a wide range of users.

ABSTRACTED-PUB-NO:

WO 9722318A EQUIVALENT-ABSTRACTS:

An absorbent article (8) comprises: (a) a front portion (10), a rear portion (12) and a crotch portion (14) connecting the front and rear portions; consisting of (b) an outer cover layer, and a body side liner layer forming a base structure (26), and incorporating an elastic layer (28) mounted between it to form extensible zones (30); and (c) an absorbent core (36) is also mounted between the outer cover layer and body side liner layer; and (d) Attachment elements (32) such as hook and loop fasteners or adhesive fasteners are attached to the outer cover layer on the rear portion (12) of it, with a corresponding attachment surface provided on the front portion (10) of the outer cover layer. Also claimed is a method for forming an absorbent article.

USE - For containing body exudates.

ADVANTAGE - Incorporates extensible zones adapted to allow the article to fit a wide range of users.

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L6: Entry 2 of 10

File: DWPI

May 8, 2002

DERWENT-ACC-NO: 1997-395461

DERWENT-WEEK: 200234

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TITLE: Production of multilayer sheet with even bonding of elastic and inelastic layers - by acquiring length reserve within its inelastic fleecy layer's plane by pre-stretching it before bonding with elastic rubber layer

INVENTOR: BOICH, H

PRIORITY-DATA: 1996DE-1004956 (February 10, 1996)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|----------------|-------------------|----------|-------|------------|
| DE 59706824 G | May 8, 2002 | | 000 | B32B005/24 |
| EP 788873 A1 | August 13, 1997 | G | 010 | B32B005/24 |
| DE 19604956 A1 | August 14, 1997 | | 008 | B32B025/10 |
| JP 09327887 A | December 22, 1997 | | 008 | B32B025/10 |
| DE 19604956 C2 | March 25, 1999 | | 000 | B32B025/10 |
| US 5939178 A | August 17, 1999 | | 000 | B32B009/00 |
| EP 788873 B1 | April 3, 2002 | G | 000 | B32B005/24 |

INT-CL (IPC): B32 B 3/28; B32 B 5/04; B32 B 5/24; B32 B 7/04; B32 B 9/00; B32 B 25/10; B32 B 27/02; B32 B 27/20; D04 H 13/00; D06 M 17/00

ABSTRACTED-PUB-NO: EP 788873A

BASIC-ABSTRACT:

A process for producing a multilayer elastic sheet from at least one elastic rubber layer (10) of film, foil or fibrous structure and at least one reinforced inelastic nonwoven fleecy layer (12) joined to the first layer at permanent bonding points (16) entails pre-stretching the fleecy layer so its fibres (18) are aligned in the pre-stretch direction and attaching it to the rubber layer in the pre-stretched state. Also claimed is the multilayer sheet obtained per se. The sheet can be reversibly stretched in a direction transverse to the pre-stretching so that the fibres of the inelastic fleecy layer between the attachment points alter their orientation to that of the stretch depending on the degree of stretch.

ADVANTAGE - The sheet acquires length reserve in one stretch direction in its inelastic layer by aligning fibres in the sheet plane in contrast with known sheets which acquire the reserve exclusively from ejecting fibres between the attachment points. Even bonding pressure can be applied to the layers.

ABSTRACTED-PUB-NO:

EP 788873B EQUIVALENT-ABSTRACTS:

A process for producing a multilayer elastic sheet from at least one elastic rubber layer (10) of film, foil or fibrous structure and at least one reinforced inelastic nonwoven fleecy layer (12) joined to the first layer at permanent bonding points (16) entails pre-stretching the fleecy layer so its fibres (18) are aligned in the pre-stretch direction and attaching it to the rubber layer in the pre-stretched state. Also claimed is the multilayer sheet obtained per se. The sheet can be reversibly stretched in a direction transverse to the pre-stretching so that the fibres of the inelastic fleecy layer between the attachment points alter their orientation to that

of the stretch depending on the degree of stretch.

ADVANTAGE - The sheet acquires length reserve in one stretch direction in its inelastic layer by aligning fibres in the sheet plane in contrast with known sheets which acquire the reserve exclusively from ejecting fibres between the attachment points. Even bonding pressure can be applied to the layers.

US 5939178A

A process for producing a multilayer elastic sheet from at least one elastic rubber layer (10) of film, foil or fibrous structure and at least one reinforced inelastic nonwoven fleecy layer (12) joined to the first layer at permanent bonding points (16) entails pre-stretching the fleecy layer so its fibres (18) are aligned in the pre-stretch direction and attaching it to the rubber layer in the pre-stretched state. Also claimed is the multilayer sheet obtained per se. The sheet can be reversibly stretched in a direction transverse to the pre-stretching so that the fibres of the inelastic fleecy layer between the attachment points alter their orientation to that of the stretch depending on the degree of stretch.

ADVANTAGE - The sheet acquires length reserve in one stretch direction in its inelastic layer by aligning fibres in the sheet plane in contrast with known sheets which acquire the reserve exclusively from ejecting fibres between the attachment points. Even bonding pressure can be applied to the layers.

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L1: Entry 1 of 5

File: DWPI

Nov 20, 2001

DERWENT-ACC-NO: 2001-212583
 DERWENT-WEEK: 200202
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TITLE: Elastically stretchable sheet useful as stock material for garments e.g. disposable diapers, includes sheet-like fibrous assembly having inelastic extensibility in two directions bonded to surface(s) of elastic sheet

INVENTOR: KOBAYASHI, T; TANGE, S ; YAMAKI, K

PRIORITY-DATA: 2000JP-0168303 (June 5, 2000), 1999JP-0198159 (July 12, 1999)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|-----------------|-------------------|----------|-------|------------|
| BR 200009150 A | November 20, 2001 | | 000 | C08J005/18 |
| EP 1069223 A1 | January 17, 2001 | E | 012 | D04H013/00 |
| AU 200047177 A | January 18, 2001 | | 000 | B32B005/02 |
| JP 2001079972 A | March 27, 2001 | | 008 | B32B005/08 |
| CA 2313707 A1 | January 12, 2001 | E | 000 | B32B005/04 |
| CN 1283422 A | February 14, 2001 | | 000 | A41D013/00 |
| KR 2001066922 A | July 11, 2001 | | 000 | D04H003/04 |

INT-CL (IPC): A41 D 13/00; A61 F 13/00; A61 F 13/15; A61 F 13/514; A61 L 15/24; B32 B 5/02; B32 B 5/04; B32 B 5/08; B32 B 27/02; B32 B 27/08; B32 B 27/12; C08 J 5/18; D04 H 1/70; D04 H 3/04; D04 H 13/00

ABSTRACTED-PUB-NO: EP 1069223A
 BASIC-ABSTRACT:

NOVELTY - An elastically stretchable sheet includes a sheet-like fibrous assembly having an inelastic extensibility in the two directions bonded to surface(s) of an elastic sheet. The elastic sheet and the fibrous assembly are bonded together at bond regions arranged intermittently in the two directions.

DETAILED DESCRIPTION - An elastically stretchable sheet (1) comprises an elastic sheet having a stretchability in two directions orthogonal to each other. A sheet-like fibrous assembly (2) has an inelastic extensibility in the two directions bonded to surface(s) of the elastic sheet (3). The elastic sheet and the fibrous assembly are bonded together at bond regions (4) arranged intermittently in the two directions. Component fibers (6) constituting the fibrous assembly are long fibers continuously extending and describing curves between each pair of adjacent bond regions in which the long fiber is bonded to the elastic sheet.

USE - As a stock material for garments, e.g. disposable diapers, sanitary napkins or disposable gowns.

ADVANTAGE - The inventive elastically stretchable sheet has high stretchability.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of an elastically stretchable composite sheet.

Elastically stretchable sheet 1

Sheet-like fibrous assembly 2

Elastic sheet 3

Bond regions 4

Component fibers 6

Continuous fibers 10

WEST



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L6: Entry 8 of 10

File: DWPI

May 1, 2001

DERWENT-ACC-NO: 1991-179609

DERWENT-WEEK: 200131

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TITLE: Non-rubbery composite for diapers, tissues, etc. - comprises two-dimensional elastic sheet and polypropylene-contg. necked material bonded at nonlinear points

INVENTOR: MORMAN, M T; NORMAN, M T

PRIORITY-DATA: 1989US-0451264 (December 15, 1989)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|---------------|--------------------|----------|-------|------------|
| CA 2030291 C | May 1, 2001 | E | 000 | B32B005/04 |
| EP 432763 A | June 19, 1991 | | 000 | |
| AU 9068056 A | June 20, 1991 | | 000 | |
| CA 2030291 A | June 16, 1991 | | 000 | |
| ZA 9009782 A | October 30, 1991 | | 000 | |
| US 5116662 A | May 26, 1992 | | 015 | B32B027/14 |
| AU 636937 B | May 13, 1993 | | 000 | B32B027/12 |
| JP 06184897 A | July 5, 1994 | | 020 | D04H001/50 |
| EP 432763 B1 | August 9, 1995 | E | 027 | D04H001/56 |
| DE 69021519 E | September 14, 1995 | | 000 | D04H001/56 |
| ES 2076284 T3 | November 1, 1995 | | 000 | D04H001/56 |
| PH 27834 A | November 25, 1993 | | 000 | B32B027/14 |
| JP 2919980 B2 | July 19, 1999 | | 019 | D04H001/50 |
| KR 168640 B1 | January 15, 1999 | | 000 | B32B027/00 |

INT-CL (IPC): A47 K 7/00; A47 L 13/16; B29 D 0/00; B32 B 3/28; B32 B 5/04; B32 B 5/26; B32 B 7/04; B32 B 27/00; B32 B 27/12; B32 B 27/14; B32 B 31/16; C08 J 0/00; D01 G 25/00; D04 H 1/50; D04 H 1/56; D04 H 1/62; D04 H 13/00

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L5: Entry 1 of 3

File: DWPI

Jan 17, 2002

DERWENT-ACC-NO: 1998-415516
DERWENT-WEEK: 200207
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TITLE: Self adhesive web - comprises multilayer structure with elastic distortion to be shaped as required for its position

INVENTOR: WIRZ, P

PRIORITY-DATA: 1998DE-1004875 (February 9, 1998)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|----------------|------------------|----------|-------|------------|
| DE 19804875 C2 | January 17, 2002 | | 000 | C09J007/02 |
| DE 29806536 U1 | July 30, 1998 | | 014 | C09J007/02 |
| EP 935035 A1 | August 11, 1999 | G | 000 | E04D005/10 |
| DE 19804875 A1 | August 12, 1999 | | 000 | C09J007/02 |

INT-CL (IPC): B32 B 25/10; B32 B 27/00; C09 J 7/02; E04 B 1/66; E04 D 3/38; E04 D 5/10; E04 D 5/14

ABSTRACTED-PUB-NO: DE 29806536U

BASIC-ABSTRACT:

The self-adhesive material web has at least one multilayer carrier (1) which can be oriented elastically in at least one direction. One layer is an elastic and flexible carrier film (10), of a rubber elastic thermoplastic elastomer, with a bonded nonwoven layer on at least one side of it to form hollow zones. The nonwoven layers (11, 12) are of polyolefins such as polypropylene or a polyester. The nonwoven is bonded to the film (10) by thermal and/or ultrasonic welding at points and/or lines. A self-adhesive layer (2) is applied to at least one side of the carrier material (1), which can be shaped, using an adhesive agent pref. of bitumen and/or butyl rubber. The adhesive layer (2) is covered by a peel-off material of a plastics film or a siliconised paper.

USE - The material is for sealing at angled or flat roofs, at windows and chimneys, and the like.

ADVANTAGE - The self-adhesive material can be shaped easily to fit into position, for simple laying at difficult locations and in long lengths. The prodn. costs are reduced.



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L3: Entry 1 of 1

File: DWPI

Jan 25, 2001

DERWENT-ACC-NO: 1998-287780
DERWENT-WEEK: 200106
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TITLE: Elastic absorbent material for sanitary wear - has nonwoven of undrawn or partially drawn fibres bonded and severed locally to an elastic film which is then stretched so that the nonwoven breaks and bulges up when sheet is relaxed

INVENTOR: SCHWINN, G

PRIORITY-DATA: 1996DE-1047459 (November 16, 1996)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|-----------------------|------------------|----------|-------|------------|
| DE <u>19647459</u> C2 | January 25, 2001 | | 000 | B32B025/10 |
| DE <u>19647459</u> A1 | May 20, 1998 | | 005 | B32B025/10 |

INT-CL (IPC): B26 F 1/00; B32 B 3/28; B32 B 25/10; B32 B 31/28; D04 H 1/00; D06 N 7/00

ABSTRACTED-PUB-NO: DE 19647459A

BASIC-ABSTRACT:

A multi-layered elastic sheet has at least one layer of rubber-elastic homogeneous film (1) attached to at least one nonwoven layer (2) of essentially inelastic, undrawn or partially drawn fibres or filaments. The layers are bonded intermittently and when the elastic layer is fully stretched the fibrous layer is flat but it bulges out when the elastic layer is relaxed. The nonwoven is perforated in numerous places from the outside through to the elastic layer by tearing or plucking. Also claimed is a process where pinned rollers (4) are used to bond the layers and tear the nonwoven at the same time. The elastic layer is then stretched to produce breaks (6) in the nonwoven, after which it is relaxed to puff up (7) the nonwoven. Also claimed is an alternative process where a nonwoven is produced by melt spinning or melt blowing which is perforated and then bonded to the elastic layer in areas which do not coincide with the perforations. The bonded material is then stretched and relaxed as before.

USE - Elastic, absorbent material for sanitary wear or nappies.

ADVANTAGE - Cost effective method of producing material where elasticity is not limited by the elasticity of the non- woven.



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L2: Entry 1 of 1

File: DWPI

Jan 2, 1997

DERWENT-ACC-NO: 1997-053542

DERWENT-WEEK: 199706

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TITLE: High bulk composite films, useful as back:sheets for nappies - made by bonding nonwoven and heat shrinkable polymer film in nip contg. embossing roll then heating to shrink film

INVENTOR: BALDAUF, G; BOICH, H H ; SCHWINN, G ; THIELE, R

PRIORITY-DATA: 1995DE-1023497 (June 28, 1995)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|-----------------------|-----------------|----------|-------|------------|
| DE <u>19523497</u> A1 | January 2, 1997 | | 008 | B29C043/30 |
| DE <u>19523497</u> C2 | June 19, 1997 | | 008 | B29C043/30 |

INT-CL (IPC): B29 C 43/30; B29 C 65/66; B32 B 27/12

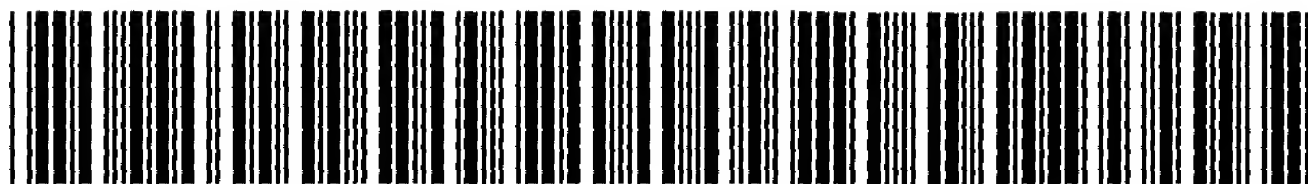
ABSTRACTED-PUB-NO: DE19523497A

BASIC-ABSTRACT:

The process involves applying a nonwoven web (10, 10') onto one side of a polymer film and using a printing roll (17) with spikes (23) to create a bond between the web and film at a series of points, opt. forming a recognisable pattern. The process uses a heat-shrinkable film with a shrinkage temp. (Ts) less than the thermal deformation temp. (Tv) of the web material. The film is shrunk at temp. (Ts) after bonding with the web, creating bulked areas of web between the bonding points due to the reduced distance between these points. Composite films made by this process are also claimed.

USE - For making backsheets used in nappies and other hygiene articles.

ADVANTAGE - High bulk and pleasant texture is obtd..



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